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09/586,601	06/02/2000	Shuji Ono	3562-0103P	6153

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EXAMINER

TRAN, NHAN T

ART UNIT PAPER NUMBER

2615

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,601

Applicant(s)

ONO, SHUJI

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/7/2004 & 7/30/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/7/2004 & 7/30/2004 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

3. The drawings (specifically, Fig. 1) are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "a camera 10" described on pages 6 & 7. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

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not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 8 is objected to because of recitation of “a plurality images” in line 2 of the claim which should be changed to -- plurality images -- or -- a plurality of images --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7, 11-16, 18-20, 23 & 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kung et al (US 5,850,470).

Regarding claim 1, Kung discloses an image selecting apparatus (10) from among a plurality of images (video images of an arbitrary scene 11) obtained by continuously photographing a subject (see Fig. 1; col. 4, lines 1-54), comprising:

an extractor (14, 18, 22) extracting data of an aimed object (face, eyes and other facial feature) from each of said plurality of images, said aimed object corresponding to an independent

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object within the image (within the image scene 11) at which a photographer aims (see Fig. 1; col. 4, lines 1-54);

a condition-storing unit (face database 16, eye database 20, person database 26) storing a plurality of predetermined selection conditions for a desirable aimed object (Fig. 1; col. 4, line 1 – col. 5, line 26);

a selecting unit (18, 22, 24) selecting at least one selection condition (i.e., at least eye feature stored in eye database 20 for recognizing various different eyes) from among the plurality of predetermined selection conditions resulting in a selection of a desired image (a desired image having a person's face is selected for further processing after face detector 14) including a desired aimed object from among said plurality images, said desired aimed object satisfying said at least one selection condition (at least eye feature) stored in said condition-storing unit. See col. 4, lines 24-54.

Regarding claim 2, Kung discloses that the extractor extracts the data of the aimed object based on depth information (coordinates information of eyes relating to other features of the object such as eyebrows and nose; see col. 2, lines 64 – col. 3, line 6) indicating the distance to each part of the subject.

Regarding claim 3, Kung discloses that the extractor extracts said data of said aimed object based on image information included in each of said images (col. 4, lines 14-54).

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Regarding claim 4, Kung also discloses that the extractor detects a judgment location (i.e., eye coordinates) from said data of said aimed object based on image information included in each of said images (see col. 4, lines 35-54), said at least one selection condition includes a predetermined selection condition (i.e., coordinates of various different eyes stored in the eye database 20) related to a desirable judgment location, and said selecting unit selects said desired aimed object including a judgment location satisfying said at least one selection condition related to said desirable judgment location (for the person to be recognized). See col. 4, lines 35-54 and col. 5, lines 10-15.

Regarding claim 5, see the analysis of claim 3, and note that “data of a plurality of said aimed objects from each of said plurality of images” is indicated by data of plurality of eyes, eyebrows and nose as described in col. 4, lines 44-54.

Regarding claim 6, see the analysis of claim 4 and note the Examiner’s comment in claim 5.

Regarding claim 7, Kung discloses that the selecting unit further comprises an image composite unit compositing said plurality of desired aimed objects (eyes, eyebrows and nose) to form a composite image (a face formed with facial features as shown in Fig. 1; col. 4, lines 55-65), said composite image including said plurality of desired aimed objects for each of said plurality of aimed objects extracted from said plurality of images.

Regarding claims 11-16, see the analyses of claims 1-6, respectively.

Regarding claim 18, it is clear that the conditions relate to at least one of shape or size of eyes or nose of the aimed object (see col. 4, lines 24-54).

Regarding claim 19, Kung also discloses that at least one predetermined selection condition relates to expression of said aimed object for identifying said desired aimed object. See Fig. 1 and col. 4, lines 24-54, wherein expression of the aimed object is indicated by the shape or size of the eyes, eyebrows or nose in a normal expression.

Regarding claim 20, it is also clear that the selecting unit selects said desired image without an operation of a user (automatic face recognition; see col. 4, lines 1-3).

Regarding claims 23 & 24, see the analyses of claims 19 & 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Nozaki et al (US 2003/0193610 A1).

Regarding claim 8, Nozaki discloses a camera (Figs. 1-3) comprising:

an input unit (image pickup means 1) forming a plurality of images of subjects (see [0048]);

an extractor (shooting evaluation means 3) extracting data of an aimed object from each of said plurality of images formed by said input unit ([0045], [0049] & [0226]);

a condition-storing unit (an inherent memory) storing a predetermined selection condition (shooting conditions, i.e., good and bad conditions) for a desirable aimed object (see [0044]-[0049], wherein “a condition-storing unit” must exist in order for the camera to function as disclosed);

a selecting unit (still image selection means 4) selecting a desired image including a desired aimed object from among said plurality of images, said desired aimed object satisfying said predetermined selection condition stored in said condition-storing unit (see [0048]-[0049]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nozaki et al (US 2003/0193610 A1) in view of Iijima et al (US 6,823,080 B2).

Regarding claim 9, Nozaki does not disclose that the input unit includes a parallaxic image data input unit inputting a parallaxic image photographed from different view points, and said extractor extracts said data said aimed object based on depth information indicating the distance each part of said subject, said depth information being extracted from said parallaxic image. However, Nozaki suggests that evaluation items other than those recited in the Nozaki's disclosure may be used to determine which image to select (see Nozaki, [0078]). In other reference to Iijima, a camera comprises a parallaxic image input unit (Figs. 2 and 3A & B) inputting a parallaxic image photographed from different view points (right and left images sensors 102 R & 102L). Iijima further teaches an extractor (image separator 105) for extracting data of an aimed object (object 2, Fig. 2) based on depth information indicating the distance to each part of the object and the depth information being extracted from the parallaxic image. See Iijima, col. 13, line 64 – col. 14, line 3.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the apparatus of Nozaki and the teaching of Iijima with the practice of using parallaxic image data captured from different view points of a parallaxic image capture unit and extracting depth information from the parallaxic image data so as to *improve* selection of an aimed object with *high precision* for further processing.

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8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nozaki et al (US 2003/0193610 A1) in view of Windle (US 6,606,117 B1).

Regarding claim 10, Nozaki teaches a plurality of selection conditions that may be used to determine how to select an image from a plurality of images (see Nozaki, [0072]-[0078]). Nozaki is silent about a condition-setting unit previously selecting at least one of the selection conditions for selecting the desired image from among a plurality of selection conditions. As taught by Windle, a camera comprises an user interface unit 105 (Fig. 1) that is used for setting a selection condition (i.e., a template for landscape) from among a plurality of selection conditions (i.e., templates for landscape, pan shot and portrait image capture; Fig. 3; col. 4, lines 39-58; col. 6, lines 1-25 and col. 7, line 44 – col. 8, line 32).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the apparatus in Nozaki with the teaching of Windle to provide the user a plurality of setting options for setting a selection condition among a plurality of selection conditions for image processing, thereby a highly operable imaging apparatus with a user friendly interface would be realized.

9. Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nozaki et al (US 2003/0193610 A1) in view of Kung et al (US 5,850,470).

Regarding claim 21, Nozaki does not teach that the predetermined selection condition relates to expression of the aimed object for identifying the desired aimed object. However, Nozaki suggests that evaluation items other than those recited in the Nozaki's disclosure may be

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used to determine which image to select (see Nozaki, [0078]). Kung teaches that expression (facial feature of a person) of an aimed object (the person's face) is pre-stored for identifying a desired aimed object (see Kung; Fig. 1; col. 4, lines 1-54).

Therefore, it would have been obvious to one of ordinary skill in the art to enhance the apparatus of Nozaki to include a predetermined selection condition relating to expression of an aimed object for identifying a desired object so that not only good image would be obtained but also images of different users would be classified and recognized accordingly.

Regarding claim 22, it is clear that desired image is selected without an operation of a user (see Nozaki, [0049], [0080]-[0081] and/or Kung, col. 4, lines 1-3).

10. Claims 17, 25 & 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kung et al (US 5,850,470) in view of Nozaki et al (US 2003/0193610 A1).

Regarding claim 17, Kung discloses all limitations discussed in claim 1 except for explicitly disclosing a stored program that is executed by a computer to perform the method of claim 1. It is well known that an image processing apparatus can be implemented with software program stored in a recording medium that is executed by a microprocessor as taught by Nozaki, [0081]. Such implementation using software program would reduce hardware circuitry and provide flexibility for system upgrade.

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Therefore, it would have been obvious to one of ordinary skill in the art to modify the imaging apparatus in Kung by using a program stored in a memory to be executed by a microprocessor so as to reduce hardware circuitry and provide flexibility for system upgrade.

Regarding claims 25 & 26, see the analyses of claims 19 & 20.


Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.


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SUPERVISORY PATENT
EXAMINER